CARBOHYDRATE RESEARCH, VOL. 179 (1988)

AUTHOR INDEX

AHRENS, R., 223 ALBERSHEIM, P., 269 ALTMAN, E., 245 ANDERSON, L., 199 ANGYAL, S. J., 1 ASPINALL, G. O., 211 AUZANNEAU, F.-I., 125

BETANELI, V. I., 37 BEYNON, L. M., 419 BOCK, K., 87, 97 BRADE, H., 223, 289 BREG, J., 411 BRIMACOMBE, J. S., 21 BRISSON, J.-R., 233, 245 BRUKHANOVA, O. V., 37 BUGGE, B., 381

Charon, D., 125 Choay, J., 163 Classon, B., 31 Contreras, R. R., 411 Craig, S. A. S., 327 Cumming, D. A., 369

Darvill, A. G., 269
Dashunin, V. V., 51
De Jongh-Leuvenink, J., 289
Dell, A., 7
Di Fabio, J. L., 233
Dmitriev, B. A., 51
Duchaussoy, P., 163
Dutton, G. G. S., 419

EATON, H. L., 393 EKIEL, I., 349

FERNANDEZ-BOLAÑOS GUZMAN, J., 97

GAREGG, P. J., 31 GOUSSAULT, Y., 381

Hakomori, S., 393 Hanai, N., 393 Hellerqvist, C., 369 Helpap, B., 173 Hindsgaul, O., 137 Hofman, I. L., 51 Huckerby, T. N., 7 ICHIKAWA, H., 315 ISHIDO, Y., 77

Jann, B., 223 Jann, K., 223 Jansson, P.-E., 359 Jeanloz, R. W., 381 Jennings, H. J., 61 Joseleau, J.-P., 321

Kabir, A. K. M. S., 21 Kaca, W., 289 Kamerling, J. P., 411 Katzenellenbogen, E., 349 Kenne, L., 359 Khondo, L., 211 Kinnear, J. A., 211 Knirel, Y. A., 51 Kobayashi, K., 315 Kochetkov, N. K., 37, 51 Köll, P., 1

Lederman, I., 163 Levery, S. B., 393 Lindh, I., 31 Lorentzen, J. P., 173 Lundt, I., 87

Manners, D. J., 327 Marais, M.-F., 321 McDonald, A. M. L., 327 Mérienne, C., 125

Nakabayashi, S., 381 Naleway, J. J., 199 Nieduszynski, I. A., 7 Niemann, H., 301 Nores, G. A., 393 Norrestam, R., 97

OTT, A. Ya., 37 OXLEY, D., 341

Painter, T. J., 259 Parolis, H., 301 Parolis, L. A. S., 301 Paulsen, H., 173 Pedersen, C., 87 Perry, M. B., 233, 245 PETITOU, M., 163 PIERCE, M., 137 POSZGAY, V., 61

RAETZ, C. R. H., 199 RIETSCHEL, E. T., 289 ROGERS, M. E., 7 ROMANOWSKA, E., 349

SAKAKIBARA, T., 77 SALYAN, M. E. K., 393 SANDERSON, P. N., 7 SCHUERCH, C., 315 SHASHKOV, A. S., 51 SHOREIBAH, M., 137 SINAŸ, P., 163 SINNWELL, V., 289 SRIVASTAVA, O. P., 137 STARK, J. R., 327 Stevenson, T. T., 269 Stirm, S., 301 Sumitomo, H., 315 Szabó, L., 125

THOMAS-OATES, J. E., 7 TOUSTER, O., 369

Verhoef, J., 289 Vliegenthart, J. F. G., 411

WARREN, C. D., 381 WEHLER, T., 359 WILKINSON, S. G., 341

Үамамото, А., 77

ZÄHRINGER, U., 289

SUBJECT INDEX

- N-Acetylglucosaminyltransferase-V, recognition of oligosaccharide substrates by, 137
- Alkyl glycopyranuronates, synthesis of 1,2-O-cyanoethylidene derivatives of, by oxidation of the 6-trityl ethers of their hexose analogues, 37
- 4-Amino-4-deoxy-L-arabinose and 1,4-dideoxy-1,4-imino-L-arabinitol, a convenient synthesis of, 199
- 7-O-(2-Amino-2-deoxy-α-D-glycopyranosyl)-L-glycero-D-manno-heptose as a constituent of lipopolysaccharides of E. coli and V. cholerae, isolation and chemical analysis of, 289
- 1,6-Anhydrohexofuranoses, n.m.r. spectra of, 1 Antigen, synthesis of a di-, tri-, and tetrasaccharide unit of the Group B streptococcal common, 61
- Base-catalysed rearrangement of some bromodeoxyheptonolactones, 87
- Binding of heparin to antithrombin III, a chemical proof of the critical role played by a 3-sulfated 2-amino-2-deoxy-D-glucose residue in the, 163
- Bromodeoxyheptonolactones, base-catalysed rearrangement of some, 87
- Capsular polysaccharide of *Streptococcus* pneumoniae, synthesis of trisaccharide repeating units of, 173
- Chemical proof of the critical role played by a 3-sulfated 2-amino-2-deoxy-D-glucose residue in the binding of heparin to antithrombin III, 163
- Citrobacter O23-lipopolysaccharide, the structure of the O-specific polysaccharide chain from, 349
- Control of depolymerisation during the preparation of reduced dialdehyde cellulose, 259
- 1,2-O-Cyanoethylidene derivatives of alkyl glycopyranuronates, synthesis of, by oxidation of the 6-trityl ethers of their hexose analogues, 37
- 3-Deoxy-D-lyxo-2-heptulosaric acid, a component of the plant cell-wall polysaccharide rhamnogalacturonan-II, 269
- Dialdehyde cellulose, control of depolymerisation during the preparation of reduced, 259
- 1,4-Dideoxy-1,4-imino-L-arabinitol, a convenient synthesis of 4-amino-4-deoxy-L-arabinose and, 199
- Dolichyl diphosphate tetrasaccharide, synthetic, as precursor of lipid-linked oligosaccharide diphosphates, 381

- E. coli K26 capsular polysaccharide, structural studies of, using g.l.c.-c.i.-m.s., 419
- Fast-atom bombardment mass-spectrometric strategies for sequencing sulphated oligo-saccharides, 7
- Furanosidic β-KDO residue, structure of the *Escherichia coli* capsular K74 polysaccharide containing, 223
- Galactomannan from the reference strain for Serratia marcescens serogroup O4, structural studies of an acidic, 341
- Glucuronic acid, identification of 4-O-[(S)-1-carboxyethyl]-D-, as a component of the *Klebsiella* serotype K22 capsular polysaccharide, 301
- Glycogens, the iodine-staining properties and fine structure of some mammalian and invertebrate, 327
- Glycosiduronic acid linkages in methylated *Khaya* ivorensis gum, cleavage of modified, using the hex-5-enose degradation, 211
- Haemophilus influenzae type a capsular antigen, synthesis of p-trifluoroacetamidophenyl β -D-glucopyranoside 4-(D-ribit-5-yl phosphate) corresponding to the, 31
- Haemophilus pleuropneumoniae serotype 3 (ATCC 27090) lipopolysaccharide, structure of the O-antigen polysaccharide of, 245
- Hex-2-enopyranoside, reactions with sodium methoxide of methyl and phenyl 4,6-O-ben-zylidene-2,3-dideoxy-2-C-p-tolylsulfonyl-α-D-erythro-, 77
- Hex-5-enose degradation, cleavage of modified glycosiduronic acid linkages in methylated *Khaya ivorensis* gum, using the, 211
- Hexofuranoses, 1,6-anhydro-, n.m.r. spectra of, 1 Higher-carbon sugars, on the stereochemistry of osmium tetraoxide oxidations of allylic systems used in the synthesis of, 21
- Identification of the primary structures of mannooligosaccharides and glycopeptides, on the utility of ¹³C-n.m.r. spectroscopy in the, 369
- Iodine-straining properties and fine structure of some mammalian and invertebrate glycogens, 327

- Isolation and chemical analysis of 7-O-(2-amino-2-deoxy-α-D-glucopyranosyl)-L-glycero-D-manno-heptose as a constituent of lipopolysaccharides of E. coli and V. cholerae, 289
- Khaya ivorensis gum, cleavage of modified glycosiduronic acid linkages in methylated, using the hex-5-enose degradation, 211
- Klebsiella serotype K22 capsular polysaccharide, determination of the primary structure of the, 301
- Klebsiella serotype K48, the structural repeatingunit of the capsular polysaccharide from, 321
- Lactones of 3-deoxy-D-manno-2-octulopyranosonic acid (KDO), synthesis of 1,5-, 125
- Lipid-linked oligosaccharide diphosphates, biosynthesis from synthetic dolichyl diphosphate tetrasaccharide, 381
- Lipopolysaccharide antigenic O-chain produced by *Salmonella carrau* (O: 6, 14, 24), structure of the major, 233
- Lipopolysaccharides of *E. coli* and *V. cholerae*, isolation and chemical analysis of 7-O-(2-amino-2-deoxy-α-D-glucopyranosyl)-L-glycero-D-manno-heptose, as a constituent of, 289
- Lyso-GM₃ (II³Neu5Ac lactosyl sphingosine), de-N-acetyl-GM₃ (II³NeuNH₂ lactosyl Cer), and related compounds, synthesis and characterization of, 393
- Mammalian and invertebrate glycogens, the iodine-staining properties and fine structure of some, 327
- Manno-oligosaccharides and glycopeptides, on the utility of ¹³C-n.m.r. spectroscopy in the identification of the primary structures of, 369
- Mass-spectrometric strategies for sequencing sulphated oligosaccharides, fast-atom-bombardment, 7
- Methyl 3-O-[α-L(and D)-rhamnopyranosyl]maltoside derivatives, synthesis and conformational analysis of, 97
- Methyl 4,6-O-benzylidene-2,3-dideoxy-2-C-p-tolylsulfonyl-α-D-erythro-hex-2-enopyranoside and its phenyl analogues, reactions with sodium methoxide of, 77
- Methyl α-D-galactopyranosides, ¹H- and ¹³Cn.m.r. spectroscopy of synthetic monosulphated, 411
- Monosulphated methyl α -D-galactopyranosides, $^{1}\text{H-}$ and $^{13}\text{C-n.m.r.}$ spectroscopy of synthetic, 411
- N.m.r. spectroscopy in the identification of the primary structures of manno-oligosaccharides and glycopeptides, on the utility of ¹³C-, 369
- N.m.r. spectroscopy of synthetic monosulphated methyl α-D-galactopyranosides, ¹H- and ¹³C-, 411

- N.m.r. study of some *Shigella flexneri* O-poly-saccharides, a ¹³C-, 359
- Octulopyranosonic acid (KDO), synthesis of 1,5-lactones of 3-deoxy-D-manno-2-, 125
- Oligosaccharide diphosphates, lipid-linked, biosynthesis from synthetic dolichyl diphosphate tetrasaccharide, 381
- Oligosaccharide substrates, recognition of, by *N*-acetylglucosaminyltransferase-V, 137
- Osmium tetraoxide oxidations of allylic systems used in the synthesis of higher-carbon sugars, on the stereochemistry of, 21
- Polysaccharide chain from *Citrobacter* O23-lipopolysaccharide, the structure of the Ospecific, 349
- Polysaccharide chain of the *Shigella dysenteriae* type 7 lipopolysaccharide, structure of the Ospecific, 51
- Polysaccharide containing furanosidic β-KDO residues, structure of the *Escherichia coli* capsular K74, 223
- Polysaccharide from *Klebsiella* serotype K48, the structural repeating-unit of the capsular, 321
- Polysaccharide of *Haemophilus pleurop*neumoniae serotype 3 (ATCC 27090) lipopolysaccharide, structure of the O-antigen, 245
- Polysaccharide rhamnogalacturonan-II, identification of 3-deoxy-D-*lyxo*-2-heptulosaric acid as a component of the plant cell-wall, 269
- Polysaccharide, structural studies of *E. coli* K26 capsular, using g.l.c.-c.i.-m.s., 419
- Polysaccharide, synthesis of a β -(1 \rightarrow 6)-linked, via ring-opening polymerization with neighbouring-group participation, 315
- Polysaccharides, a ¹³C-n.m.r. study of some *Shigella flexneri* O-, 359
- Preparation of reduced dialdehyde cellulose, control of depolymerisation during the, 259
- Reactions of methyl 4,6-O-benzylidene-2,3-dideoxy-2-C-p-tolylsulfonyl-α-D-erythro-hex-2enopyranoside and its phenyl analogue with sodium methoxide, 77
- Rearrangement of some bromodeoxyheptonolactones, base-catalysed, 87
- Recognition of oligosaccharide substrates by *N*-acetylglucosaminyltransferase-V, 137
- Rhamnogalacturonan-II, identification of 3-deoxy-D-lyxo-2-heptulosaric acid as a component of the plant cell-wall polysaccharide, 269
- Ring-opening polymerization with neighbouringgroup participation, synthesis of a β -(1 \rightarrow 6)linked polysaccharide via, 315

- Salmonella carrau (O: 6, 14, 24), structure of the major lipopolysaccharide antigenic O-chain produced by, 233
- Serratia marcescens serogroup O4, structural studies of an acidic galactomannan from the reference strain for, 341
- Shigella dysenteriae type 7 lipopolysaccharide, structure of the O-specific polysaccharide chain of the, 51
- Shigella flexneri O-polysaccharides, a ¹³C-n.m.r. study of some, 359
- Stereochemistry of osmium tetraoxide oxidations of allylic systems used in the synthesis of higher-carbon sugars, 21
- Streptococcal common antigen, synthesis of a di-, tri-, and tetra-saccharide unit of the Group B, 61
- Streptococcus pneumoniae, synthesis of trisaccharide repeating units of the capsular polysaccharide of, 173
- Structural repeating-unit of the capsular polysaccharide from *Klebsiella* serotype K48, 321
- Structural studies of an acidic galactomannan from the reference strain for Serratia marcescens serogroup O4, 341
- Structural studies of E. coli K26 capsular polysaccharide, using g.l.c.-c.i.-m.s. 419
- Structure of *Klebsiella* serotype K22 capsular polysaccharide: another glycan containing 4-*O*-[(S)-1-carboxyethyl]-D-glucuronic acid, 301
- Structure of the K74 antigen from Escherichia coli O44:K74:H18, a capsular polysaccharide containing furanosidic β-KDO residues, 223
- Structure of the major lipopolysaccharide antigenic O-chain produced by *Salmonella carrau* (O:6, 14, 24), 233
- Structure of the O-antigen polysaccharide of Haemophilus pleuropneumoniae serotype 3 (ATCC 27090) lipopolysaccharide, 245
- Structure of the O-specific polysaccharide chain from *Citrobacter* O23-lipopolysaccharide, 349
- Structure of the O-specific polysaccharide chain of the *Shigella dysenteriae* type 7 lipopolysaccharide, 51

- 3-Sulfated 2-amino-2-deoxy-D-glucose residue, a chemical proof of the critical role in the binding of heparin to antithrombin III played by a , 163
- Sulphated oligosaccharides, fast-atom-bombardment mass-spectrometric strategies for sequencing, 7
- Synthesis and characterization of lyso-GM₃ (II³Neu5Ac lactosyl sphingosine), de-*N*-acetyl-GM₃(II³NeuNH₂ lactosyl Cer), and related compounds, 393
- Synthesis and conformational analysis of methyl 3-O-[α-L(and D)-rhamnopyranosyl]maltoside derivatives, 97
- Synthesis of a di-, tri-, and tetra-saccharide unit of the Group B Streptococcal common antigen, 61
- Synthesis of a β -(1 \rightarrow 6)-linked polysaccharide *via* ring-opening polymerization with neighbouring-group participation, 315
- Synthesis of 4-amino-4-deoxy-L-arabinose and 1,4-dideoxy-1,4-imino-L-arabinitol, a convenient, 199
- Synthesis of 1,5-lactones of 3-deoxy-D-manno-2-octulopyranosonic acid (KDO), 125
- Synthesis of 1,2-O-cyanoethylidene derivatives of alkyl glycopyranuronates by oxidation of the 6-trityl ethers of their hexose analogues, 37
- Synthesis of p-trifluoroacetamidophenyl β -D-glucopyranoside 4-(D-ribit-5-yl phosphate) corresponding to the *Haemophilus influenzae* type a capsular antigen, 31
- 2,3,5-Tri-O-acetyl-1,6-anhydrohexofuranoses,
 ¹³C-n.m.r. spectra of, 1
- p-Trifluoroacetamidophenyl β-D-glucopyranoside 4-(D-ribit-5-yl phosphate) corresponding to the *Haemophilus influenzae* type a capsular antigen, synthesis of, 31
- Trisaccharide having the central glucopyranose residue in the ${}^{1}C_{4}$ conformation, synthesis of a branched, 97
- Trisaccharide repeating units of capsular polysaccharide of *Streptococcus pneumoniae*, synthesis of, 173